

Fortigenesis or "Whence the strength?": An empirically derived theory of fortitude as a proposed answer

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Despite living under and having to deal with severe stressful conditions many people do not succumb. Antonovsky (1979) proposed that the crucial concept in understanding how people manage stress and stay well is sense of coherence. This concept forms the core construct of his salutogenic paradigm which refers to the study of the origins of health. Strümpfer (1995), suggested that Antonovsky's prime concern was really the origins of strength in general and proposed that fortigenesis referring to the origins of strength is much more embracing and descriptive than salutogenesis. This article proposes, based on empirical research that the origins of strength lie in fortitude. Through our interactions with the world we develop evaluative appraisals of the self, the family and support from others. The sum of these evaluative appraisals constitutes the essence of fortitude.

Psychology, like other health disciplines, has largely been dominated by two models of health, namely the clinical/medical model and the public health model. The medical model has largely been criticised on the following grounds (Thoresen & Eagleston, 1985):

1. It seeks a single "best" treatment that eradicates the cause; yet chronic diseases have many causes and may not be completely curable.
2. It results in the dehumanization of health care due to an overreliance on sophisticated technology and overspecialization of health care providers.
3. It acknowledges only the physical factors in disease and does not address the social, psychological, and behavioral dimensions of disease.
4. It is actually a model of disease care rather than health care.

The public health model is regarded by many as being an answer to the medical model. Indeed, the public health model with its emphasis on prevention is a vast improvement over the clinical/medical model. It allows for the early detection of diseases as an alternative to diagnosis and therapy and it emphasizes prevention. Within the area of stress research this shift from a medical model to a public health model was characterised by a call for a movement away from the simple cause-effect studies that dominated stress research. In a landmark paper on the hardy personality, Kobasa (1982) called for such a shift so that we could:

"test some of the more optimistic interpretations of human functioning. Staying healthy in the face of stressful life events is...seen as an indicator of adjustment and even optimal behavior...Given this one can argue that the determination of those characteristics that keep people healthy under stress furthers the understanding of human development and well-being" (p. 5)

This call for an emphasis on health rather than illness, on coping rather than succumbing, was followed by some noticeable shifts in conceptual orientation and thinking albeit not in methodology. For example, the nomenclature in some articles, showed a definite bend in this direction. Holahan & Moos (1985) in an article on the relationship between personality, coping, support and psychosomatic symptoms, not only called the article "Life stress and health: Personality, coping and family support in stress-resistance", but the whole article reflects a focus on the maintenance of health and an emphasis on personal resources that enables health.

Both the clinical and the public health models are important and necessary elements of our total health care system, but both takes as the point of departure disease. The clinician wants to diagnose and cure the disease, while the public health expert wants to prevent people from coming down with the disease (Antonovsky, 1979). However, in our focus on disease we have ignored the fundamental question of health and have remained stuck at the question of disease. Even in the examples quoted the emphasis was still on disease/negative functioning as an outcome. In other words, health was still defined as the absence of illness or the absence of psychological dysfunction rather than the presence of wellness or positive psychological functioning. However, defining a concept in terms of the absence of another phenomenon creates conceptual problems. One cannot define something by negating something else. From a scientific point of view a given phenomenon needs to be studied directly with an eye to measuring its complexity as accurately as possible (Thoresen & Eagleston, 1985).

The shift towards salutogenesis or the origins of health

Although health research and theorising has historically been biased on the side of dysfunction and disease there are conceptualisations of health that goes beyond this negative definition of health. The most famous of these definitions is that of the World Health Organisation (WHO, 1964):

"health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (p.1).

Note the reference to "not only the absence of disease". Health has also been equated with quality of life as a goal (Seedhouse, 1986) and described as a resource which is necessary to ensure that daily life can go on (Litva & Eyles, 1994). A very comprehensive formulation of positive health has been provided by Seeman (1989). He describes positive health in terms of the phenomenon of effective personal functioning using the concept of organismic integration. The term organismic is meant to suggest a pervasive process that includes all of the person's behavioral subsystems: biochemical, physiological, perceptual, cognitive and interpersonal. Integration refers to the character of the transactions between the subsystems. Seeman (1989) proposes that in the integrated person there is clear communication among these subsystems so that they generate congruent information throughout the system.

All of these positive definitions of health represents variants of the paradigm of salutogenesis proposed by Antonovsky (1979, 1984a, 1986, 1987) as complementary to the pathogenic paradigm. The term salutogenesis refers to the origins of health or wellness (salus=health, genesis=origin). This paradigm focuses on positive health (i.e. not simply the absence of disease) and is primarily concerned with the maintenance and enhancement of wellness.

According to Strümpfer (1993) a number of theoretical developments in psychological literature show a clear relationship to the salutogenic paradigm. These include Super's (1955) distinction between hystiology and psychopathology, Maslow's (1973) self-actualization and Roger's (1959) fully-functioning person. One could add to these Jung's (1933) formulation of individuation and Allport's (1961) conception of maturity. All of these share the same focus on positive psychological functioning and wellness.

Although very sensitive to the need for a pathogenic orientation and recognising the advances made within this paradigm, Antonovsky (1979) argues quite coherently that salutogenesis rather than pathogenesis *"is the great intriguing mystery and important concern in the field of health"* (p.9). He bases this conclusion on an analysis of morbidity statistics which indicates that the majority of the population in any society is characterised by some pathological condition. As such illness should not be considered deviant at all. On the basis of this it is proposed that whereas the fundamental assumption guiding the pathogenic

paradigm is one of homeostasis, the core assumption within the salutogenic paradigm is one of heterostasis since deviance is "*normal, inherent, endemic*" (Antonovsky, 1984a, p.2).

A key aspect of Antonovsky's salutogenic orientation is the view of health. According to Antonovsky (1987) thinking within the pathogenic paradigm is based on a fundamental dichotomy between health and illness. He proposes that a more powerful way of looking at health-illness is to view it in terms of a continuum which he called the "health ease/dis-ease continuum". The salutogenic paradigm proposes that all of us falls somewhere between the two poles of total terminal illness and total wellness and the focus of study therefore would be the location of a person on this continuum at any given time. Another implication of thinking salutogenically is that stressors are not only regarded as risk factors which can be reduced, but as a challenge giving rise to successful coping. Antonovsky (1984b) argues that the consequences of stressors depend on a person's response to stress. As such, rather than asking "how can we eradicate a stressor?" one should ask "*How can we learn to live, and live well, with stressors and possibly even turn their existence to our advantage*" (Antonovsky, 1984, p. 116).

Since the emphasis in the pathogenic orientation is on disease, thinking pathogenic one would ask "what caused (or will cause) disease X". The focus in other words is on risk factors. Thinking salutogenically on the other hand would compel us to search for factors that contribute to movement towards the healthy end of the continuum. A very important aspect to be highlighted here is that these are often different factors. In other words, movement towards the healthy end of the continuum is not necessarily due to being low on risk factors. For example, Antonovsky (1987) points out that it has long been known that the factors that contribute to work satisfaction are not the same as those contributing to work dissatisfaction.

Antonovsky (1987) indicates that the most important consequence of thinking salutogenically is that it focuses our attention on those factors that contribute to coping:

"thinking salutogenically not only opens the way for, but compels us to devote our energies to the formulation and advance of a theory of coping" (p. 13).

The answer to the salutogenic question, therefore, for Antonovsky lies in understanding how people cope or as Antonovsky puts it "in successful tension management". The concept of sense of coherence is proposed as the core of the answer to the salutogenic question.

Sense of Coherence

If stress is endemic and stressors are "*omnipresent in human existence*" (Antonovsky, 1979, p.10) the crucial question then becomes, "How do we manage tension?. What are the resources at our disposal that enable us to resolve tension at least some of the time? The answer according to Antonovsky (1979) is Generalised Resistance Resources (GRR) which is defined as "*any characteristic of the person, the group, or the environment that can facilitate effective tension management*" (p.99).

Antonovsky (1979) list a whole range of GRR, including physical and biological GRRs, artifactual-material GRRs, cognitive and emotional GRRs, valuative-attitudinal GRRs, interpersonal-relational GRRs and macrosociocultural GRRs. Given this wide variety of GRRs Antonovsky (1979) was compelled to ask "why is a GRR effective in combatting stressors?". The answer proposed is that "*a generalised resistance resource works...because it provides life experiences which promote a strong sense of coherence*" (Antonovsky, 1984, p.5).

Sense of Coherence is formally defined as:

"a global orientation that expresses the extent to which one has a pervasive enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environment in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement" (Antonovsky, 1987, p. 19).

Sense of Coherence is regarded as a construct that is perceptual in nature with both cognitive and affective components. It is a way of seeing the world and one's life in it. In this regard it is seen as a dispositional orientation rather than a state or trait. The dimensions of a sense of coherence are:

- 1) Comprehensibility which refers to the sense that life is ordered, consistent and makes sense. "*The person high on the sense of comprehensibility expects that stimuli that he or she will encounter will be predictable, or at the very least, when they do come as surprises, that they will be orderable and explicable*" (Antonovsky, 1987, p.17).
- 2) Manageability refers to the extent to which one perceives that resources are at one's disposal which can be used to meet the demands of the stimuli one is

confronted with. *"To the extent that one has a high sense of manageability, one will not feel victimised by events or feel that life treats one unfairly"* (Antonovsky, 1987, p.18).

- 3) Meaningfulness represents the motivational element. It refers to the extent that one feels that life makes sense emotionally rather than cognitively. *"Formally SOC refers to the extent to which one feels ... that at least some of the problems and demands posed by living are worth investing energy in"* (Antonovsky, 1987, p.18).

Antonovsky (1987) sees Sense of Coherence as developing over the lifespan from infancy to early adulthood. In the development of this disposition the following are regarded as important influences: child-rearing patterns, social-role complexes, idiosyncratic factors and chance. In early adulthood a person comes to be located at some point on the very weak to very strong continuum. In this regard he describes the Sense of Coherence as a *"deeply rooted, stable dispositional orientation of a person"* (p. 124). Any changes in this Sense of Coherence is regarded as temporary fluctuations around a mean and usually caused by some significant life experiences. Antonovsky (1987), therefore, appears very ambivalent about the possibility of planned interventions and modifications to the Sense of Coherence.

Related Concepts

Strümpfer (1993) and Antonovsky (1987) discusses a number of related constructs that all supports *"the conclusion about the emergence of a new paradigm"* (Strümpfer, 1993, p.274). These include hardiness (Kobasa, 1979), potency (Ben-Sira, 1985), and stamina (Thomas, 1981; Colerick, 1985). A summary of the research linking these constructs to health and coping has been presented by Strümpfer (1993).

Hardiness is defined as a personality construct composed of three different dimensions (Kobasa, 1982). These dimensions are a (a) sense of control over experienced events (b) feeling of commitment to various life areas, and (c) a view of life change as a challenge. Persons who view stressful situations as meaningful and interesting (commitment), see stressors as malleable (control) and construe difficulties as challenges are defined as hardy. Excellent reviews on pre-1991 hardiness research has been presented by Funk and Houston (1987), Orr and Westman (1988) and Funk (1992), while Lightsey

(1996) provides a summary of post-1991 research. These reviews have all raised the same methodological and conceptual problems, namely:

- Factor analyses have failed to support it either as a unitary construct or as consisting of three separate components. Whereas some factor analyses have found three factors others have found one or two factors (Hull, Van Treuren, & Virnelli, 1987; Orr & Westman, 1988).
- The theorised buffering effect of hardiness has not been supported by the available evidence. Hardiness appears to directly predict mental and physical health outcomes (Cohen & Edwards, 1989; Funk, 1992).
- There is some evidence that the hardiness scale might inadvertently measure neuroticism since it has been found that controlling for neuroticism usually eliminates the predictive ability of hardiness (Allred & Smith, 1989; Rhodewalt & Zone, 1989).
- Post-1991 studies which took into account some of the methodological and conceptual problems identified by earlier reviews also failed to provide support for the hardiness construct. For example, hardiness was not found to be a predictor of illness (Williams, Wiebe, & Smith, 1992), or physical symptoms (Korotkov & Hannah, 1994). In addition it was found that hardiness contributed nothing to the prediction of future well-being above the predictive ability of commitment (Florian, Mikulincer, & Taubman, 1995).

From a salutogenic perspective the biggest concern is that hardiness is measured by negative indicators, namely alienation from self and from work, need for security, powerlessness and external locus of control. Strümpfer (1993), therefore concludes:

"In view of these conceptual, measurement and validity problems, I am inclined to consider the hardiness construct as part of the salutogenic paradigm but both its operationalisation and the supporting evidence is still very much in the pathogenic paradigm" (p. 272).

Other constructs that have been used to describe the mechanism that enables people to stay healthy includes potency and stamina. Potency has been defined as *"a person's enduring confidence in his own capacities as well as confidence in and commitment to his/her social environment, which is perceived as being characterised by a basically meaningful and predictable order and by a reliable and just distribution of rewards"* (Ben-

Sira, 1985, p. 399). Stamina has been defined as *"Physical or moral strength required to withstand disease, fatigue, or hardship"* (Thomas, 1981, p.41). It has also been referred to as a reflection of *"well-tested convictions that obstacles are surmountable and that personal outgrowth is an outcome of personal struggle"* (Colerick, 1985, p. 997). Central to all these views is the commitment to answering the question "how do people cope". In addition, all of these theorists share the assumption that one's perception of one's world is the most crucial aspect in coping. The construct of fortitude presented below very clearly separates this perception or appraisal into different and distinct areas - self, family and others.

Fortigenesis

Strümpfer (1993, 1995) is regarded as one of the stronger proponents of salutogenic thinking in South Africa. In a thought provoking analysis of Antonovsky's work, Strümpfer (1995) argues that the concept of salutogenesis should be broadened to fortigenesis (fortis=strength, genesis=origins), which refers to the origins of psychological strength in general. He writes:

"This article will argue that Antonovsky struggled with a much more encompassing problem, namely that of the sources of strength in general. References to 'strength' appear in many of his writings. Already in the prologue to his first book...he wrote: 'I began groping towards the question that occurs to one when examining lives such as those of my parents: Whence the strength?'" (p. 81).

In developing the argument that fortigenesis is a much broader, explanatory construct Strümpfer (1995) refers not only to Antonovsky's own theoretical work but also to research undertaken by Antonovsky and his co-workers. For example, he indicates that sense of coherence and generalised resistance resources impact on other ease/dis-ease continua like retirement (Antonovsky & Sagy, 1990), disability (Feigin, 1994) and work-related variables (e.g. Strümpfer, Fritz, & Page, 1991). He also refers to some of Antonovsky's more recent work (Antonovsky, 1991) in which Antonovsky constantly uses the expression 'salutogenic strengths'. Based on this analysis Strümpfer (1995) concludes that the term fortigenesis appears to be more descriptive of the paradigm than salutogenesis:

(In the process of searching for the origins of health),

"Antonovsky could not help but point to the closely related origins of strength needed to be effective at other end-points of human functioning too. This total endeavour

should be acknowledged: 'fortigenesis' is more embracing, more holistic, than 'salutogenesis'." (p. 82).

In a related vein, but from a Social Work perspective, Saleebey (1996) describes what he calls the strengths perspective. This perspective does not deny the existence of pathology and illness. Instead it denies that all people who face pain or trauma inevitable becomes incapacitated. It requires that individuals, families and communities be viewed in the light of their capacities, talents, competencies and hopes. These elements of the strength perspective in Social Work clearly place it within the paradigm of fortigenesis.

A proposed answer: Some preliminary thoughts on a theory of Fortitude

The fortigenic paradigm concerns itself with the fundamental question: Where does the strength come from? In an investigation of the health-sustaining and stress-reducing effects of a range of individual characteristics and environmental factors (Pretorius, 1997) a possible answer to this question emerged. The variables included in this study was self-esteem, self-denigration, self-worth, personal competence, personal efficacy, beliefs about support from others, perception of problem-solving skills, perceived number and availability of support, support from friends, support from family and family environment (for example Cohesion, Conflict, Organisation, Control). A factor analysis of all the variables that distinguished between a distressed and a stress-resistant group indicated that these variables are in fact representative of three much broader constructs. Factor analysis identified three meaningful factors which was labelled Self-Appraisals, Support Appraisals and Family Appraisals. The obtained results suggested a particular theory of fortitude, namely the hypothesis that the individual with fortitude (one who copes successfully with stress and experiences low levels of depression) has positive appraisals of the self, the family and of support from others. In other words, it is proposed that strength or the absence thereof derives from our construction of ourselves and our world. Fortitude therefore is formally defined as the strength to manage stress and stay well and this strength derives from an appraisal of the self, the family and support from others.

It is believed that people are born with the tendency to appraise the environment and themselves (Folkman & Lazarus, 1988). As a result of our countless experiences with the world, we develop general beliefs about ourselves and our world. According to Cognitive-experiential self-theory (Epstein, 1994) these beliefs develop into an implicit model of the

world, or 'theory of reality' that has two major divisions: a world-theory and a self-theory. These constructs about the self and the world plays a major role in how we adapt to the world. Postmodernism and more specifically constructivism also assert that rather than passively observing reality, we actively construct the meanings that frame and organise our perceptions (Hare-Mustin & Marecek, 1988). In this regard appraisal constitutes an active construction of reality (Mahoney & Patterson, 1992). It is therefore suggested that the appraisals that are especially relevant for coping are:

- an evaluative awareness of the self: This includes both the global appraisal of the self as well as more specific appraisals such as problem-solving efficacy and mastery or competence.
- an evaluative awareness of the family environment, for example support from family, level of conflict and cohesiveness in the family and family values.
- an evaluative awareness of the support from others. This would include both quantitative (i.e. perceived levels of support) as well as qualitative (i.e. satisfaction) dimensions of support. In addition, it would include beliefs about the efficacy of using such support resources.

Fortitude in essence, therefore is the strength derived from appraising ourselves and our world positively enabling us to cope with life stress. Mischel (1981) points out that human behavior depends on the "stimulus as coded" which underscores the importance of how an individual perceives, interprets and experiences his or her world.

Research and empirical support for each of these dimensions exist independently. There is well documented evidence on the relationship between self-esteem, sense of control or mastery, perceived social support as well as family environment and well-being. I am therefore slightly ambivalent about suggesting that the dimensions of fortitude should be viewed separately. Fortitude, I propose is the sum of these three domains. However, it could be argued that much can be gained from studying these dimensions separately. It is conceivable that they interact in particular ways, for example that a positive appraisal of one area could compensate for a less positive appraisal of another domain. It could also be that the evaluative appraisals developing in one area (e.g. self) are influenced by the appraisals of another area (e.g. family). I believe that the variable of interest, namely fortitude, is the outcome of these mechanisms, be they compensatory or otherwise. In other words, these

domains when viewed separately do not constitute fortitude. One could only study these areas separately to determine how they interact to shape fortitude.

Each of these appraisal domains has to a lesser or greater extent been recognised in other related concepts. In discussing the highly effective individual Mackinnon (1960) describes the concept of personal soundness as central to effective functioning. Individuals high on personal soundness were, amongst others, characterised by an image of the father as a respected person and positive relations with other siblings. Rak and Patterson (1996) points to the following factors that identifies resilient children:

- Personal characteristics including an active approach towards problem solving, ability to gain other's attention and a proactive perspective.
- Family conditions including four or fewer children in the family, the existence of a network of kin and structure and rules in the household.
- Supports in the environment including teachers, clergy and neighbours.
- Self-concept factors.

In discussing the concept of stamina, Thomas (1981) lists a number of characteristics of the healthy personality identified by previous research. These include but are not limited to a warm relationship with parents, a lack of closeness to parents, ambivalent feelings in regard to self and others and close family background. The definition of potency advanced by Ben-Sira (1985) also refers to a person's confidence in his/her own capacities as well as confidence in his/her social environment.

The terms of invulnerability and invincibility (Anthony, 1974) have also been used to describe the process of dealing with adversity. Anthony (1974) identified invulnerable children as those who had a supportive relationship with parents and a sense of mastery within themselves. Dyer and McGuiness (1996) describe resilience as the presence of protective factors that serve to moderate the effect of adversity. These protective factors are specific competencies that are necessary for resilience to occur. The competencies are skills and abilities that the individual can access and they exist in three domains, namely individual competencies, interpersonal competencies and familial competencies.

These authors have to a large extent identified factors that are relevant to the discussion of fortitude. The major difference is, however, that these factors have not clearly been located within a theory of appraisal. Rather, they have often been presented as a mixture of objective conditions and self-assessments.

An equally important question remains: What are the processes through which these appraisals affect our ability to cope. I must confess to a personal affinity to the question "What kind of person is healthy" rather than a preoccupation with how these characteristics work to engender positive health. In this regard I therefore only suggest a tentative process that could conceivably be involved in the effect of fortitude on maintaining or improving one's position on the ease/dis-ease continuum. This process is compatible with Lazarus and Folkman's (1987) theoretical stress model. In this model they refer to generalised beliefs that determine stress perceptions and response. Although they meant these beliefs to refer specifically to self-beliefs it is equally plausible that these could include general beliefs about the world and others. One can therefore hypothesize that given a stressful encounter, people with less positive appraisals of the self, the family and support are prone to self-doubt, perceptions of coping deficiencies and disengagement from active coping efforts. More positive appraisals of the self, the family and support on the other hand, could lead to confidence in facing stressful demands and more problem-focused coping.

Conclusion

Fortitude has been presented as a construct that could help explain how people maintain positive psychological well-being. In this regard a possible health-sustaining role is predicted for fortitude. It could also explain how people in the face of stress manage to maintain positive psychological well-being. In other words this suggests a stress-reducing role for fortitude. It would be important to note however, that within a salutogenic framework both health-sustaining and stress-reducing effects would be considered as stress-management. This is based on the salutogenic assumption that stress is endemic and stressors are "*omnipresent in human existence*" (Antonovsky, 1979, p.10). In other words, even those effects that we consider direct effects, irrespective of level of stress, represents stress-managing, since stressors are always present.

Elements of the construct of fortitude have been studied independently, for example self-esteem, support and family environment. However, it is suggested that these elements in fact represent broader domains and it is the interaction of these domains (self, family, support or others) that constitutes fortitude. This construct offers a direction both for research as well as intervention.

An agenda for research

1. High on the agenda should be the development of suitable assessment instruments. Although my emphasis would be on the development of sound psychometric instruments that are suitable for large scale surveys, this does not preclude the use of other methodologies to study the construct.
2. Studies would have to be designed to test both the health-sustaining and stress-reducing functions of fortitude. However, this construct has been presented within the framework of salutogenesis and more specifically fortigenesis. One would therefore design studies that defines the dependent variable positively. In other words, in studying the effect of fortitude there should be an emphasis on positive indicators of well-being.
3. More longitudinal studies should focus on the development of these appraisals.
4. Studying the relationship between demographic factors like gender and age and fortitude is another promising line of research.
5. The relationship between and overlap between the construct of fortitude and other similar constructs like sense of coherence and hardiness is another fruitful area of study.
6. Intervention studies, i.e. determining the effect of various types of interventions in affecting fortitude should also be considered important.

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